

## STDs in Adolescents and Young Adults

### Public Health Impact

Compared to older adults, adolescents (10- to 19-year-olds) and young adults (20- to 24-year-olds) are at higher risk for acquiring STDs for a number of reasons: they may be more likely to have multiple (sequential or concurrent) sexual partners rather than a single, long-term relationship; and they may select partners at higher risk. In addition, for some STDs, for example *Chlamydia trachomatis*, adolescent women may have a physiologically increased susceptibility to infection due to increased cervical ectopy.

In addition, the higher prevalence of STDs among adolescents reflects multiple barriers to quality STD prevention services, including lack of insurance or other ability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality.

### Observations

- Numerous prevalence studies in various clinic populations have shown that sexually active adolescents have high rates of chlamydial infection.<sup>1,2,3</sup> The Regional Infertility Prevention Program that performs large scale screening for detecting chlamydial infections among women attending family planning clinics demonstrate that younger women consistently have higher positivity rates of chlamydia than older women, even as prevalence declines. An example is the Region X Chlamydia Project, which has screened women in family planning clinics since 1988 (Figure K).
- Among women, 15- to 19-year-olds had the highest rate of gonorrhea in 2001 compared to all other age categories (Figure P and Table 21). In addition, 20- to 29-year-old women had the highest rates of primary and secondary syphilis in 2001 (Figure R and Table 34). Among men, 20- to 24-year-olds had the highest rate of gonorrhea and 30- to 39-year-olds had the highest rate of primary and secondary syphilis (Figures Q and S and Tables 21 and 34).
- Rates of gonorrhea among male adolescents generally decreased between the years 1991 and 2001 (Figure Q). In the 15- to 19-year-old group, the rate declined for a third year, going from 337.9 cases per 100,000 males in 1999, to 320.6 in 2000, to 307.5 in 2001, an overall 9.0% decrease. Among young men in the 20- to 24-year-old group, the rate of gonorrhea had generally been declining in the early 1990s but then increased slightly in the late 1990s and now has remained relatively unchanged in 2000 and 2001 (559.4 and 563.6 cases per 100,000 males, respectively).
- In 15- to 19-year-old women, the 2001 gonorrhea rate of 703.2 cases per 100,000 females was similar to the 2000 rate of 699.3. Among young women in the 20- to 24-year-old group, the rate of gonorrhea in 2001 was 664.1, a 6.0%

increase from 626.5 in 2000 and a 22.4% increase from the rate in 1996 (542.7) (Figure P, Table 21).

- In 2001, the highest age-specific gonorrhea rates among women and the third highest rates among men were in the 15- to 19-year-old group (Figure 14 and Table 21).
- Since 1990, approximately 20,000 female National Job Training Program entrants have been screened each year for chlamydia. This program, administered by the U.S. Department of Labor at more than 100 sites throughout the country, is a job training program for economically-disadvantaged youth aged 16 through 24 years. Among women entering the program from 26 states and Puerto Rico in 2001, based on their place of residence before program entry, the median state-specific chlamydia prevalence was 10.6% (range 5.1% to 18.0%) (Figure L). Chlamydial infection is widespread geographically and highly prevalent among these economically-disadvantaged young women.<sup>3</sup>
- Data from National Job Training Program centers submitting gonorrhea specimens to the national contract laboratory from female students aged 16 to 24 years indicate a high prevalence of gonococcal infection in this population. Specimens from at least 100 students from each of 17 states and Puerto Rico, were tested by the contract laboratory; the median state-specific gonorrhea prevalence was 3.7% (range 0.7% to 8.1%) in 2001 (Figure O).
- The Adolescent Women Reproductive Health Monitoring Project was established in 1999 to monitor STD prevalence and reproductive health measures among adolescent women (less than 20 years old) in non-traditional venues, including school-based clinics, juvenile detention centers, drug treatment centers, and organizations serving street youth. In 2001, results from this screening project, which uses urine-based tests, identified a median site-specific chlamydia positivity of 9.6% (range 7.2% to 17.7%) at 16 school-based clinics and 17.6% (range 14.3% to 19.0%) at 16 organizations serving street youth (Figure M). Median site-specific gonorrhea positivity was 1.6% (range 1.2% to 4.8%) at school-based clinics and 4.4% (range 2.7% to 6.4%) at organizations serving street youth (Figure N).
- Among adolescent women attending juvenile detention facilities, data from the Adolescent Women Reproductive Health Monitoring Project and the Jail STD Prevalence Monitoring Project identified a median chlamydia positivity of 14.8% (range 4.0% to 25.8%) (Figure GG) and a median gonorrhea positivity of 5.6% (range 0.0% to 13.6%) (Figure II) (see **STDs in Persons Entering Corrections Facilities**).

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<sup>1</sup> Centers for Disease Control and Prevention. Recommendations for the prevention and management of *Chlamydia trachomatis* infections, 1993. *MMWR* 1993;42(No. RR-12).

<sup>2</sup> Lossick J, Delisle S, Fine D, Mosure D, Lee V, Smith C. Regional program for widespread screening for *Chlamydia trachomatis* in family planning clinics. In: Bowie WR, Caldwell HD, Jones RP, et al., eds. *Chlamydial Infections: Proceedings of the Seventh International Symposium of Human Chlamydial Infections*, Cambridge, Cambridge University Press 1990, pp. 575-9.

<sup>3</sup> Mertz, KJ, Ransom RL, St. Louis ME, Groseclose SL, Hadgu A, Levine WC, Hayman C. Decline in the prevalence of genital chlamydia infection in young women entering a National Job Training Program, 1990-1997. *Am J Pub Health* 2001;91(8):1287-1290.

Year	<18 Years	18-19 Years	20-24 Years	25-29 Years	30+ Years
1988	12.2	12.0	8.5	5.2	2.5
1989	10.8	10.5	6.5	4.0	2.0
1990	10.2	9.5	6.5	3.5	1.5
1991	8.8	8.2	5.2	3.0	1.5
1992	7.8	7.0	4.5	2.5	1.0
1993	6.5	5.5	3.2	2.0	0.8
1994	6.4	5.8	3.5	2.2	1.2
1995	5.0	4.5	3.2	2.0	1.2
1996	5.2	4.5	3.0	1.8	1.2
1997	4.8	4.5	3.0	1.8	1.0
1998	5.8	5.2	3.8	3.0	1.5
1999	5.7	5.5	4.2	3.2	1.5
2000	6.1	6.0	4.8	3.8	2.0
2001	6.1	6.0	4.8	3.8	1.5

SOURCE: Regional Infertility Prevention Program: Region X Chlamydia Project (Alaska, Idaho, Oregon and Washington)

Map of the United States showing the prevalence of hepatitis B virus (HBV) by state. The map uses a grayscale color scale to represent different prevalence ranges. A legend on the right side of the map provides the key for the colors and the corresponding prevalence ranges. The legend also includes a table of prevalence data for the District of Columbia (DC) and the states of Vermont (VT), New Hampshire (NH), Massachusetts (MA), Rhode Island (RI), Connecticut (CT), New Jersey (NJ), Delaware (DE), Maryland (MD), and the District of Columbia (DC).

Prevalence (%)

Color	Prevalence Range (%)	n
White	See *	26
Light Gray	<10	9
Medium Gray	10.0-14.9	17
Dark Gray	≥15	1

Legend Data:

State	Prevalence (%)
VT	9.9
NH	
MA	
RI	
CT	
NJ	13.9
DE	13.4
MD	
DC	

Map Data:

State	Prevalence (%)
WA	9.6
OR	6.2
CA	7.6
AZ	11.2
TX	13.5
LA	8.8
MS	18.0
AL	13.8
GA	12.8
FL	13.2
SC	12.3
NC	11.8
VA	10.1
PA	11.5
NY	9.6
CT	10.7
RI	5.1
MA	10.6
NH	9.5
VT	10.3
ME	10.1
DE	10.3
MD	10.3
DC	10.3

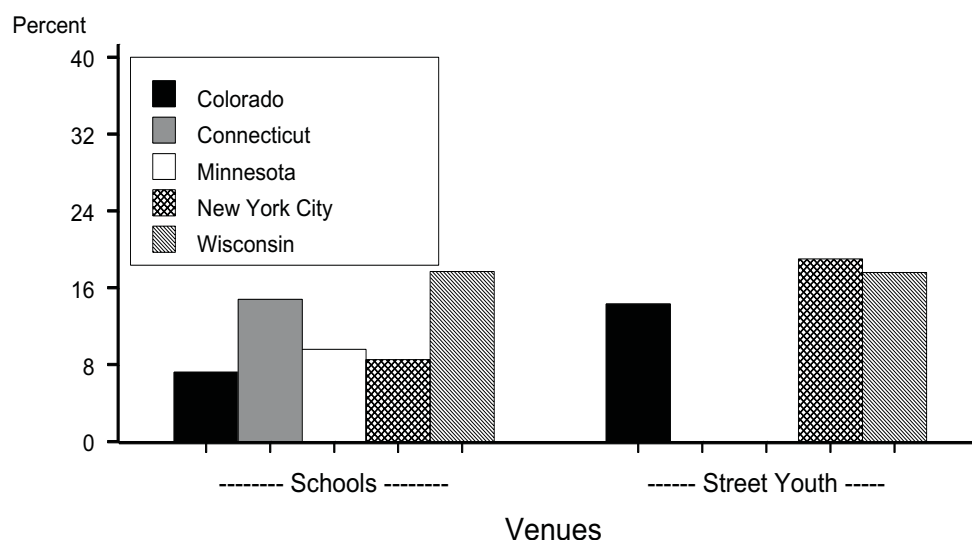
Puerto Rico 9.8

Virgin Is.

Note: The overall chlamydia prevalence among female students entering the National Job Training Program in 2001 was 10.8%.

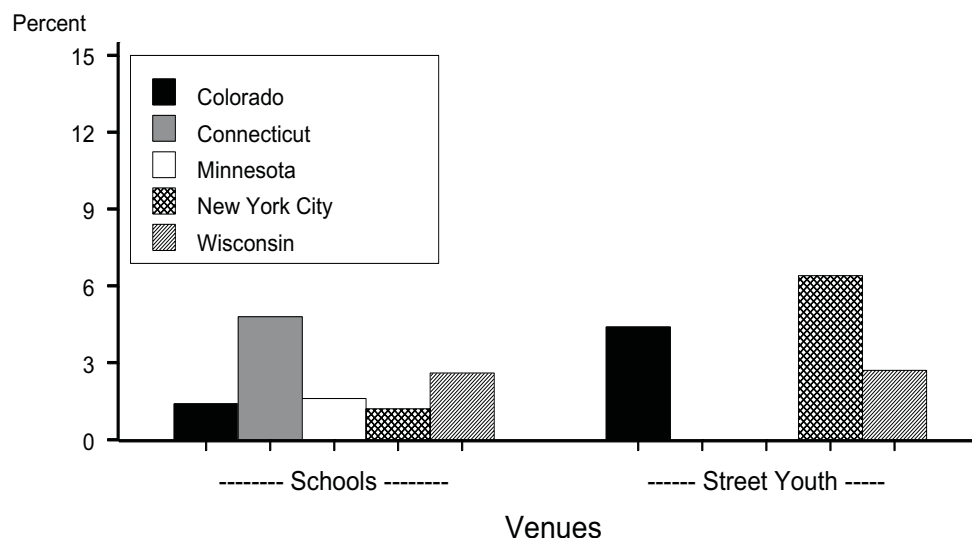
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**Figure M. Chlamydia — Adolescent Women Reproductive Health Monitoring Project**  
**chlamydia positivity by venue and project area, 2001**



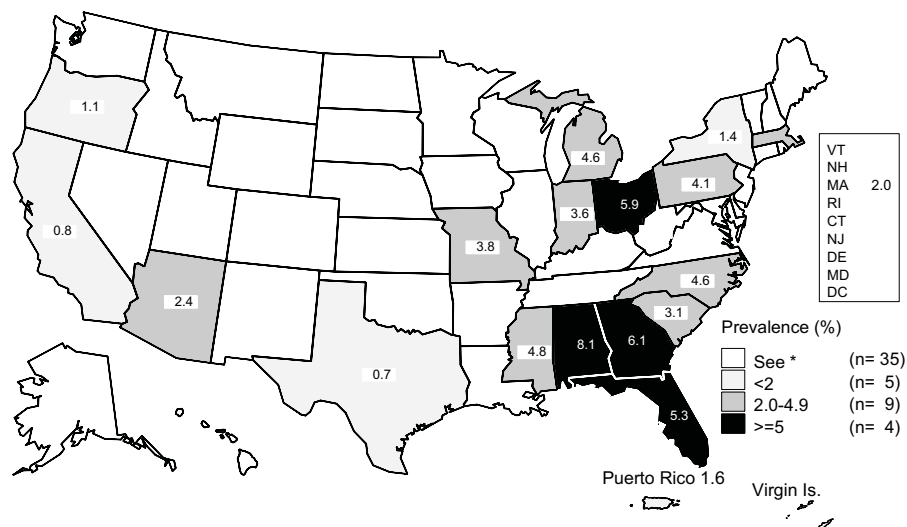
Note: Where data are missing for project areas and venues, no testing or fewer than 50 chlamydia tests were performed at the missing location in 2001.

**Figure N. Gonorrhea — Adolescent Women Reproductive Health Monitoring Project**  
**gonorrhea positivity by venue and project area, 2001**



Note: Where data are missing for project areas and venues, no testing or fewer than 50 gonorrhea tests were performed in 2001.

**Figure O. Gonorrhea — Prevalence among 16-24 year-old women entering the National Job Training Program by state of residence: United States and outlying areas, 2001**

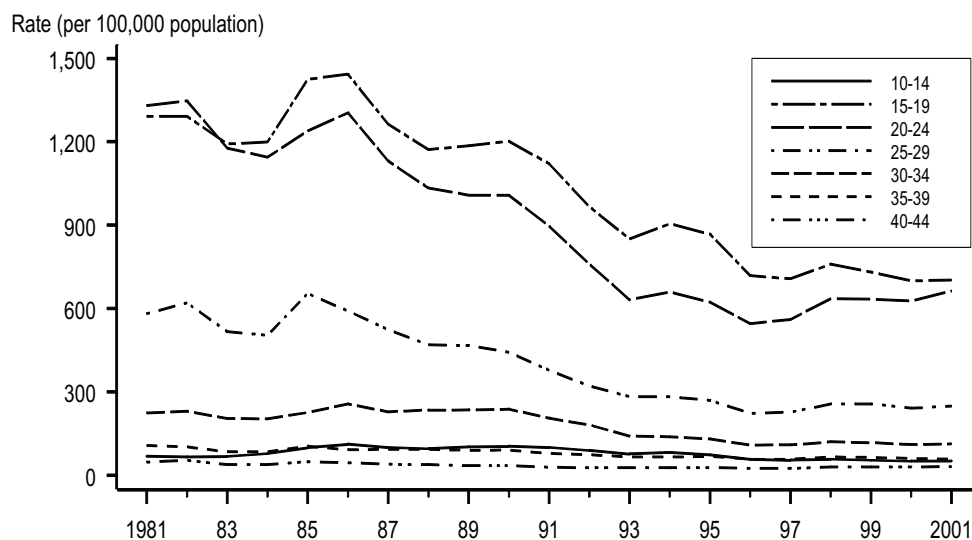


\*Fewer than 100 women residing in these states and entering the National Job Training Program were screened for gonorrhea by the national contract laboratory in 2001.

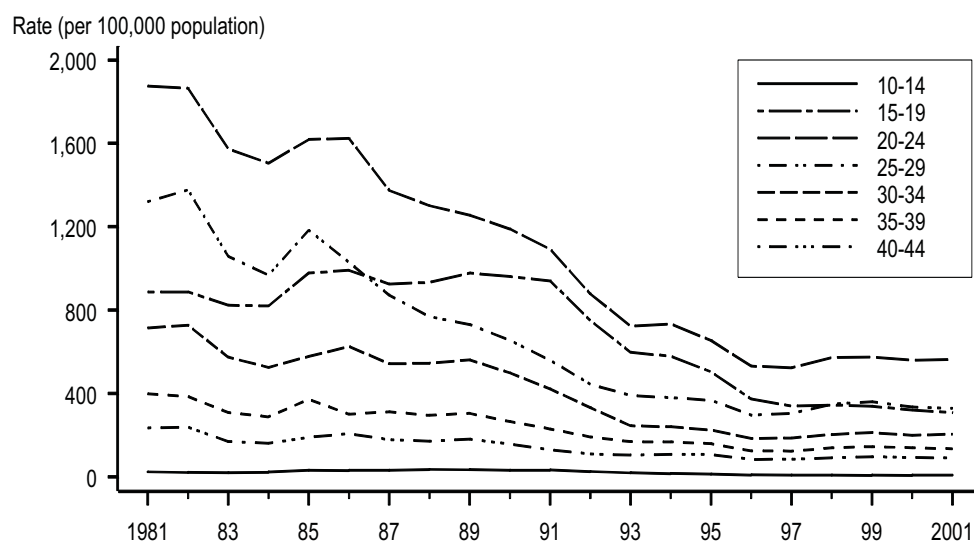
Note: Many training centers test female students for gonorrhea using local laboratories; these results are not available to CDC. For this map, gonorrhea test results for students at centers submitting specimens to the national contract laboratory were included if the number of gonorrhea tests submitted was greater than 90% of the number of chlamydia tests submitted. The overall gonorrhea prevalence among female students entering the National Job Training Program in 2001 was 3.3%.

SOURCE: U.S. Department of Labor

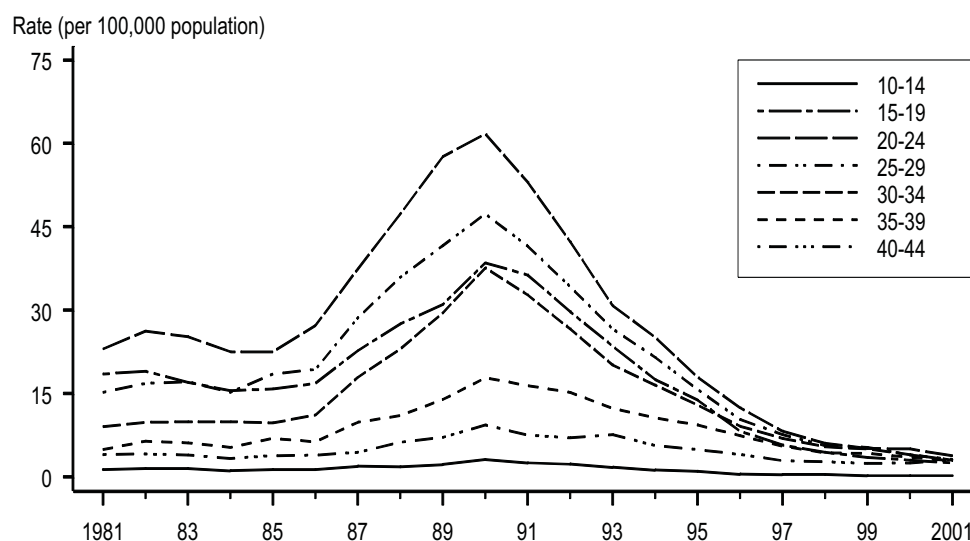
**Figure P. Gonorrhea — Age-specific rates among women 10-44 years of age: United States, 1981-2001**



**Figure Q. Gonorrhea — Age-specific rates among men 10-44 years of age: United States, 1981–2001**



**Figure R. Primary and secondary syphilis — Age-specific rates among women 10-44 years of age: United States, 1981–2001**



**Figure S. Primary and secondary syphilis — Age-specific rates among men 10-44 years of age: United States, 1981–2001**

